# Column E Explanation

1. Registration Number – 42-R-0003

2. Species used in this study – chipmunks, tree squirrels

3. Total number of animals used in the study;
   Chipmunks – 37
   Tree Squirrels – 9

4. Number of Column E animals used in the study
   Chipmunks - 7
   Tree squirrels – 4

5. Explanation of the study:

The chipmunks and tree squirrels were used in a study designed to determine what birds and mammals can serve as a source of West Nile Virus for mosquitoes that feed on people and domestic animals. In this study, animals were exposed to WNV by intraperitoneal injection. Those that were susceptible to the virus would be expected to show clinical signs.

The plan for management of potential pain and distress was to euthanize (using a method approved by the AVMA Panel on Euthanasia) affected animals as soon as clinical signs were noted. However, we found that the disease progressed very quickly and the chipmunks and tree squirrels reported in category E were found dead before clinical signs were noted.

6. Justification for not using anesthetics and analgesics:

A search of literature (1965 through 2005), conducted in May 2005 was used to determine that the use of analgesics could interfere with the study. Key works used included: virus infection and anesthetics, virus infection and analgesics, analgesics and liver detoxification, analgesics and flaviviruses, analgesics and Japanese encephalitis virus, analgesics and St. Louis virus, aspirin and virus infection, antipyretics and virus infection, aspirin and influenza virus.

Anesthetics and analgesics could not be used in this study because there is evidence that these drugs would impact the data collected and negate the studies by:

1) interfering with the development of viremia. (Analgesics such as the oxicam group are antipyretic. Use of these drugs would interfere with the development of viremia compromising the attempt to mimic that which occurs under natural conditions.)

2) enhancing the pathogenic effect of a virus infection (Sunden et. al., J. Vet. Med. Sci. 2003:1185-8)

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3) interfering with virus replication (Liao et. al., J. Virol. 2001:7828-39)